

**ABSTRACT**

The present invention relates to a novel human polypeptide defensin Def-X, genomic DNA and cDNA encoding Def-X, vectors containing Def-X  
5 encoding polynucleotides, and cells transformed with these vectors. The invention  
also provides for the use of Def-X polypeptides as an antibiotic, a cytotoxic, repair,  
and endocrine regulatory agent, and as pesticide. Def-X can also be used as agent,  
a cosmetic or pharmaceutical compositions for the treatment of microbial  
10 infections, in particular bacterial, fungal, and viral infections, parasitic infections,  
cancer, inflammation, and immune deficiencies. The invention provides diagnostic  
methods and kits for the determination of a microbial or parasitic infection and/or  
inflammation; also provided are methods of screening for predisposition to  
immune deficiencies or cancer.

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